
DESIGN

STRUCTURES

CONSTRUCTION V

WORKING DRAWING I

THEORY OF ARCHITECTURE

BUILDING SERVICES

SPECIFICATION

COMPUTER APPLICATION

GREEN ARCHITECTURE

A.P.T

FFFA
SEMESTER

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In Charge: - Ar. Anuradha Bhute

Class Coordinators

Section A- Vaijayanti Yadav

Section B- Ar. Rita Meshram

Section C- Ar. Sneha Mandekar

Architectural Design

Coordinator: Ar. Anuradha Bhute

Team- Prof. S.R Marathe, Dr. Neeta Lambe, Ar. Sujata Godbole, Ar. Shobhana Tembhurnikar Ar.

KetkiTidke, Ar. VaijayantiYadav, Ar. Rita Meshram, Ar. Sneha Mandekar

Construction Technology & Materials –V

Team: - Dr. Neeta Lambe, Ar. Madhura Rathor, Ar. Shobhana Temburnikar, Ar. Anuradha Bhute, Ar. Rita Meshram, Ar. Sneha Mandekar

Structural Design & Systems –V

Subject Teachers Mr.Rupal Wadegaonkar

Building Services II

Subject Teachers -Prof. Pratima Dhoke, Ar. Anuradha Bhute

Architectural Graphics-V

Team – Ar. AnuradhaTikkas, Ar. Sanjivane Mohgaonkar, Ar. Ketki Tidke, Ar. Anuradha Bhute, Ar. Vaijayanti Yadav, Ar. Rita Meshram

Theory of Architecture

Subject Teachers – Ar. KetkiTidke, Ar. Vaijayanti Yadav

Specification

Subject Teachers –Ar. Seema Burele, Ar. Sneha Mandekar

Elective A-Computer Applications II

Subject Teachers – Astral, Ar. Sujata Godbole, Ar. Vaijayanti Yadav

Elective B- Appropriate Technology

Subject Teachers – Ar. Shobhana Temburnikar, Ar. Sneha Mandekar

Elective B: Landscape Design Studio

Subject Teachers: - Ar. KetkiTidke, Ar. Rita Meshram

Vision

The vision limits to the present situation or at best for the near future. We should mention that we equip students to venture into the future.

Our vision is to reach global standards by deliberate modernization without losing the essential characteristics of our tradition. Being a women's college we find it more pertinent to imbibe both these qualities very consciously in our girl students.

We wish to produce socially responsible architects with sensitivity towards social issues of immediate contexts, national concerns and global effects and positive and creative approach towards life.

Mission

To create an educational environment in which students are prepared to meet the challenges of a fast developing and changing world.

Hence the students are equipped with:

- Up to date knowledge
- Analytical and practical skills
- Creative approach towards everything that they undertake
- Attitude to be sensitive towards national, social and environmental issues

While addressing the global challenges we believe strongly in anchoring ourselves to the immediate context. We accept gratefully our role in preserving and enhancing Vidarbha and Nagpur- the place, its people and architecture.

Core Values

- | | | |
|--------------|-----------------|--------------|
| • Integrity | • Creativity | • Innovation |
| • Discovery | • Collaboration | • Respect |
| • Discipline | • Excellence | • Diversity |

Objectives

- To develop among students academic and Professional competency.
- To foster value-based, creative and critical learning
- To hone skills of living in a technological, globalized and ecologically aware environment
- To develop culture of commitment to excellence

Code of Conduct

Punctuality- It is mandatory for students to be punctual in the college and shall have to be present every day at 8.45 a.m.. Every student is expected to attend the morning assembly. Attendance of the students will be taken at the time of assembly by respective class co-ordinators.

The attendance will also be taken at the beginning of the classes in the afternoon after lunch break. The record of attendance shall be displayed at the end of each month for students. Every student is expected to go through the displayed attendance and request rectification of the record within 8 days by talking to the class teacher if her attendance has been wrongly recorded.

In case of absentism, student shall bring a letter of absence duly signed by her parents/guardian. However, a student having less than 75% attendance will face disciplinary action and will not be permitted to appear for University Examination.

Dress Code – Salwar suit/ Jeans /Leggings with long Kurti.

Extracurricular activities- Credits are allotted to each activity and students are required to attend the activities to earn these credits.

Every student has to attend the programmes organized by the college from time to time.

Attendance for programme of 26th January and of 15th August is mandatory for every student and the dress code a white Salwar Suits/Leggings with Long Kurti.

Study tours- Every year study tours are arranged for students of different years as per their curriculum requirements. Active participation in Study Tour is necessary.

Academic Performance

Submission schedule of all the subjects of a semester will be displayed at the beginning of the session. Students must follow the submission schedules given by respective subject teachers. No late submissions will be accepted after the scheduled date.

Midterm assessment

A midterm assessment will be conducted to assess the progress of a student. It is mandatory for all the students to appear for this assessment.

Student Council

The Student Council will be formulated for the main purpose of empowering the students. Having a formal setup of a Student Council enables students to organize and conduct certain activities, co-ordinate publications like 'Her Space', and properly convey any concerns students may have to the college administration and teaching faculty.

The student council also takes the lead in organizing and coordinating many events in the academic year – like daily assembly, Republic day and Independence day celebrations, NASA, Teachers Day,

Archiventure, Women's day celebration and all other major events conducted by the college.

The structure of the council is such that students from all years find representation in it. The team is headed by fourth year students with representative from first, second and third year. Third year students take over the reins when fourth year students go for their training in the 8th semester. Final year students act as mentors to the council.

The organization set up for student council will comprise of President, Vice-president, Secretary, Vice-secretary, Treasurer. In addition, there are Class Representatives from first and second year – one representative from each of the three sections in a year.

SCHEME OF EXAMINATION																			
THIRD YEAR B.ARCH.																			
Semester - 5																			
Sr. No.	Sub. Code	Sub. Name	Category	Board	Load Per Week					Credits					Paper/ Sessional	Duration in Hours	Max. Marks	Total Marks	Min. Pass Marks
					L	T	D	S/P	Total	L	T	D	S/P	Total					
1	5S-A-1	Architectur	DC	AR	2	0	0	5	7	2	0	0	5	7	Sessional		100	100	100
														Viva-voce		100	100		
2	5S-A-2	Constructi on	DC	AR	2	0	4	0	6	2	0	4	0	6	Sessional		100	100	50
														Paper	3	100	100	40	
3	5S-A-3	Structural E	ES	AR	2	1	0	0	3	2	1	0	0	3	Sessional		30	100	40
														Paper	3	70			
4	5S-A-4	Building Se	DC	AR	1	1	0	0	2	1	1	0	0	2	Sessional		30	100	40
														Paper	3	70			
5	5S-A-5	Architectur (Working Drawing)	DC	AR	1	0	1	0	2	1	0	1	0	2	Sessional		50	100	50
														Viva-voce		50			
6	5S-A-6	Theory of A	DC	AR	1	0	0	1	2	1	0	0	1	2	Sessional		50	50	25
7	5S-A-7	Specificati on	DC	AR	1	0	1	0	2	1	0	1	0	2	Sessional		50	50	25
8	5S-AA-1	Elective a	DE	AR	1	0	2	0	3	1	0	2	0	3	Sessional		100	100	50
9	5S-AA-2	Elective b	DE	AR	1	0	2	0	3	1	0	2	0	3	Sessional		100	100	50
TOTAL					12	2	10	6	30	12	2	10	6	30			1000	1000	470
Total Paper-4, sessionals- 7 , viva voce-1 (Passing heads- 12)																			
Elective a -	Building Automation Systems/Advanced Building Materials/Specialised Services/Computer Applications-II																		
Elective b -	Appropriate Technology/Eco Friendly Architecture/Regional Architecture/Sustainable Development/Green Architecture																		
	Landscape Design Studio																		

ARCHITECTURAL DESIGN-IV

Design Co ordinator: Ar. Anuradha Bhute

Teacher's In charge: Prof. S.R Marathe, Dr. Neeta Lambe, Ar. Sujata Godbole, Ar. Shobhana Tembhurnikar, Ar. Ketki Tidke, Ar. Vaijayanti Yadav, Ar. Rita Meshram, Ar. Sneha Mandekar

Dates: July: 1,3,8,10,15,17,22,24,29,31 Aug: 5,7,14,19,21 Sept: 4,9,11,16, 18, 23, 25, 30 Oct: 2,7,9,16

The students of 5th semester are at a very crucial stage of their curriculum. Until now, they have learnt the basics of architectural design in their first and second year of architecture. The students are now equipped with the understanding of the varied activities, their inter relationships, circulations within and basics of site development. They are also aware of the aspects of the architecture like climatology, landscaping and basic building services.

Introduction

Migration of people from rural areas to urban areas has increased due to rapid urbanization as it gives wide range employment opportunities which require various degrees of skill which the big cities can provide employment to rural migrants who are by and large unskilled and illiterate. This has increased the activities in informal sector. The spatial distribution of informal sector in a city has given rise to squatter settlement or informal housing. There are multiple reasons for the growth of squatter settlements or informal housing including rapid urban migration, urban governance, and the housing demand-supply gap. studies have also shown that these settlements are a space for entrepreneurship and provide accessible affordable housing for urban migrants

The gap between growing demand for affordable urban housing and insufficient supply has encouraged the formation of squatter settlement. Whenever the demand surplus is not met by formal sectors, this gap is filled by unplanned informal dwellings as slum.

Local governments in India operate with very low tax bases, therefore they are unable to finance even 50% of municipal costs. As a result, informal districts of the city are worst hit by low service levels. If the squatter settlement population is largely informal and tax non-compliant, local governments see little incentive to spend money on improving their service levels. This is evident in visible open drainage lines, and lack of streetlights, roads, household toilets, and garbage collection services. This has led to major public health issues such as open defecation and the presence of unsanitary waste adjacent to houses. The extremely dense housing also causes communicable diseases to spread rapidly. (Source: Addressing Slum Redevelopment Issues in India, by Michelle Hindman, Olivia Lu-Hill, Sean Murphy, Sneha Rao, Yash Shah, Zeqi Zhu, Dow Sustainability Fellowship-2015 Report- International Institute of University of Michigan)

Revitalization of such settlements is a need of an hour. As architects we should try to give solutions which are based on sustainable community model. With this as a base, the theme identified for this year's 5th semester design project is **Revitalisation**. The main objective of fifth semester design projects, minor and major is to study characteristics to understand the Social Issues related to squatter settlements and address the growing demand for affordable urban housing. For the purpose of study, Kachipura Squatter Settlement is identified.

Ar. Suraksha Acharya will be conducting a three days workshop on Sustainable Development from 25th July to 27th July 2019

Project I- Short Project – Understanding Chaos Theory through Kachipura Squatter Settlement

Duration: - Two weeks

The minor project is based on the analysis of Kachipura Squatter Settlement and the major project will deal with the revitalisation of the same area. Through the socio economic and cultural study of the Kachipura settlement, the present unhealthy condition of the settlement will be understood and then the response for revitalisation of the area would be applied in the major project. The minor project would be a group study project wherein 120 students would be divided into number of groups and each group would carry out the primary survey of the identified area.

Aim: To study the social issues of the squatter settlement in an urban area.

Objectives:

- To understand the Chaos theory in Slums.
- To analyse the present living condition of slum dwellers.
- To understand their needs and future requirements as according to their changing life styles.
- To understand the socio-cultural aspect of the community.
- To understand various policies related to slum upliftment.

Studio Modalities

Minor project will be a group study project. Each group will consist of 8 students, there will be 15 groups.

Design Stages

Stage I: Introduction

Stage II: Data Collection & Reconnaissance Survey of the Site

Stage III: Primary Survey

A: Updating the Base Map

B: Primary Surveys

- Socio Economic survey
- Physical survey
- Built up survey

Stage III: Discussion with Social Analyst to compile observations and inferences

Stage IV: Analysis of Kachipura Slum

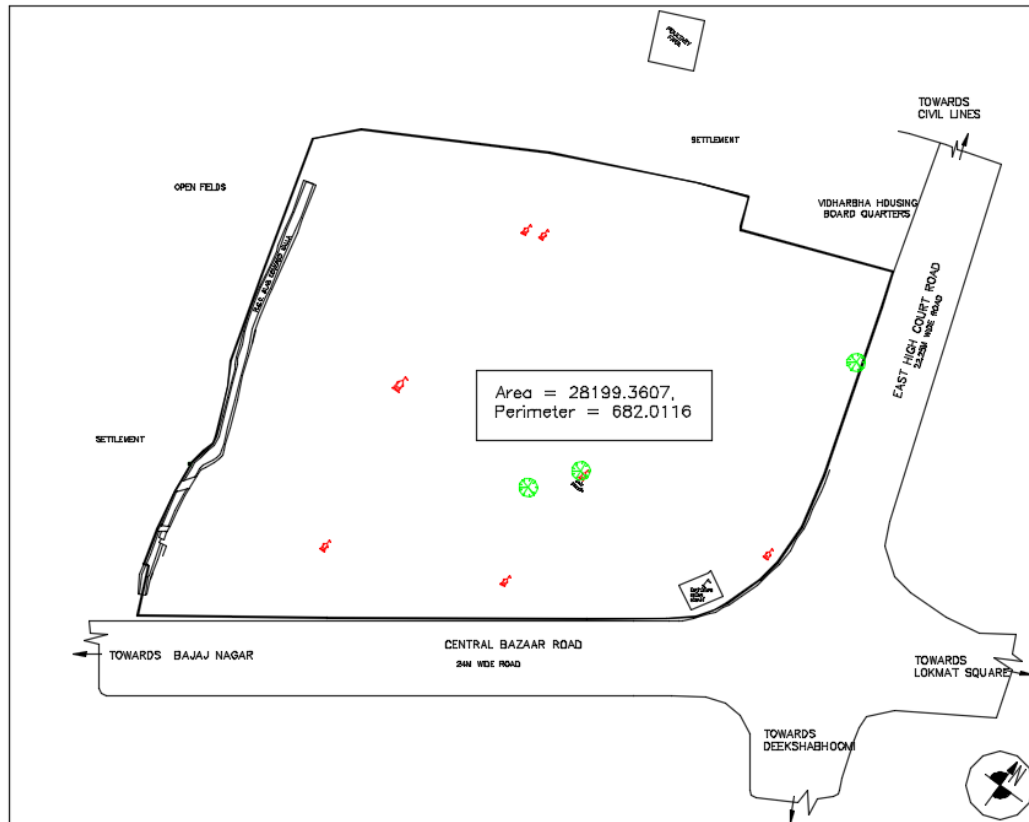
Stage V: Framing of Design Programme

Stage VI: Designing of Unit Plans

Design stages:

DATE	MODULE	TASKS	STUDIO DISCUSSION	EXPECTED WORK
1 st July 2019	Module A: Understanding of Social Issues of Squatter Settlements & Precedent Study	Stage I: Introduction of the project Stage II: Understanding of social issues of Squatter Settlement by 1. Precedent Studies 2. Understanding of Government policies Stage III: Data Collection & Reconnaissance Survey of the Site	<ul style="list-style-type: none"> • Social Issues • Socio Economic Status of Inhabitants • Policies • Byelaws • Need for sustainable Approach 	Discussion & Site Visit
3 rd July 2019, 8 th July 2019	Module B: Primary Survey & Analysis	Stage IV: Primary Survey to be conducted under following heads <ul style="list-style-type: none"> • Socio Economic survey • Physical survey • Built up survey Analysis of the survey to be worked out	Survey Formats to be discussed and given to the students to fill. Social Survey Methods will be introduced and social Analyst will be involved for data analysis.	Submission I A2 size sheets with survey findings, observations, inferences and study model
REVIEW 1 – SURVEY FINDINGS -10th JULY 2019				
FINAL SUBMISSION OF MINOR PROJECT- 15th JULY 2018				
Submission requirements: A2 size sheets with survey findings, observations, inferences and study model of Existing Site (3 Models)				
15 th , 17 th , 22 nd , 24 th July	Module C: Architectural Intervention	Framing of Design Programme Detailing of house Types, A, B, C & D Identification of House types such as A Type – 35 Sq mt (approx.) B Type – 55 Sq mt (approx.) C Type – 75 Sq mt (approx.) D Type – 95 Sq mt (approx.) No. of households to be accommodated = 330 Nos.	Discussion on Design Programme Discussion on House types - row houses, semi-detached & detached houses	A2 Size sheet of Design Programme Study Models of Units & Designs to be worked out
25 th , 26 th & 27 th July 2019	Ar. Suraksha Acharya will be conducting a three days workshop on Sustainable Development			

Site: The selected site is Kachipura, Ramdaspeth, Site Area is 28,199 Sqm



Major Project (80% of time duration)

Revitalization of the Kachipura (Squatter settlement) through sustainable community model

Aim: To widen the understanding of the social issues of squatter settlement and possibilities of Architectural interventions

Learning Objective: To understand the impact of architectural intervention on sustainable development of squatter settlement / informal housing.

Objectives:

- Evolve a suitable housing model through participatory approach.
- To understand the concept of environmental sustainability.
- To understand the implications of urban context.

Design Stages

Stage I: Understanding of Kachipura as a Squatter Settlement

Stage II: Detailed Design Programme & Concept Evolution

Stage III: Draft Layout Plan

Stage IV: Modifications in unit plans to work out detailed Cluster Plans

Stage IV: Final Layout Plan to be designed

Stage V: Architectural Detailing

Studio Modalities

DATE	MODULE	TASKS	STUDIO DISCUSSION	EXPECTED WORK
29 th , 31 st July 2019, 5 th , 7 th , 14 th , 19 th August 2019	Module Architectural Intervention	C: Stage I: Understanding of the issues related to slums	Discussion	A2 Size sheet
		Stage II: Detailed Design Programme & Concept Evolution	Discussions on Design Programme and concepts related to social issues, sustainability etc	A2 Size sheets to be made
		Stage III: Draft Housing Layout to be designed using clustering of houses, row houses, semi-detached & detached houses, hierarchy of roads, hierarchy of open spaces and amenities	Discussion on various site plans, joining of units to form clusters	Alternatives of Site plans & Site Model
		Stage IV: Modifications in designed unit plans to work out detailed cluster plans	Discussions regarding unit plans & Cluster plans	Detailed unit plans & cluster plans
		Stage V: Final Layout Design		Final detailed Site plan
REVIEW II & SUBMISSION ON 21ST AUGUST 2019				

4th, 9th, 11th, 16th Sept 2019	Module Architectural Detailing	D:	Presentation & Detailed drawings of <ul style="list-style-type: none"> • Site Plan • Housing Layout • House types • Landscape Plan • Detailed Cluster Plans • Plan of Amenities • Services Plan • Elevations, Sections & Views • 3D Model & Revit Views 		Final Detail Drawings on A1 Sheets
Review III: 18th September 2019					
Prefinal External Review: 25th September 2019					
Corrections to be incorporated to the final drawings					Final A1 Sheets to be produced
Final Submission: 7th October 2019					

Marking scheme

Attendance (20 marks)	Minor project (20 marks)		Major Project (50 marks)			External Jury (10 marks)	Total Marks 100
	Review 1	Final submission	Review 1	Review 2	Final submission		
20	10	10	10	10	30	10	100

CONSTRUCTION TECHNOLOGY & MATERIALS

Subject Co-ordinator: - Ar. Shobhana Tembhurnikar.

Teachers Incharge: - Dr. Neeta Lambe, Ar. Shobhana T, Dr. Madhura Rathod, Ar. Rita Meshram, Ar. Anuradha Bhute, Ar. Sneha Mandekar

July: 2, 4, 9, 11, 16, 18, 23, 25, 30 Aug: 6, 8, 13, 20, 22 Sept: 3, 5, 12, 17, 19, 24, 26

Oct: 1, 3, 10, 15, 17

Topics	Objectives	Time Required	Sketch Book	Site Visit/Market Survey	Audio Visual	Interactive Teaching	Expected Output/Date Of Submission
Unit-I False ceiling (12hrs)	To understand the concepts of Suspended Ceiling Design considerations, methods of construction & materials used concealed lighting A.C. ducts inlets and outlets, patent systems like Gypboard, Luxalon ceilings etc.	2,4,9,11 July 12 hours class + site visit and market survey. 2 nd July -3 hrs introduction presentation on onsite work	Creative exercise generating options for false ceiling design for a commercial activity. Unit of fixing details with materials	Options for false ceiling design.	Application of materials and techniques used for false ceiling designs with respect to change in context and variation in typology	Model making and site visit	Sketches, site visit report, conceptual model, market survey and sheet plate
		4 th July 3 hrs- Site visit	Site visit sketches	To be identified later, as per availability		On-site hands-on experience	Sketches of fixing details site visit photographs
		9 th July- 3hrs Market survey 11 th July- 3 hrs. Design problem		Identifying various materials available in market w.r.t fixing angles, suspenders, ceiling covering materials, lighting, A.C ducts etc.		Learning through observation and collection of materials.	Model making and plate on the design problem with ceiling design, materials and fixing details.
Unit-II	To study the design	16 th July- 1hr	Sketches of	Site visit to three	Explaining basic	Clarifying the	Plate and site

Expansion Joints (6hrs)	considerations for Expansion Joints To study materials and methods of constructing expansion joints in building.(Framed structure and load bearing)	Introduction to the topic. 2 hrs.- Site visit 18 th july- 3 hrs.- site visit report& Plates	details seen on site.	different locations for showing the expansion joint methods for different building elements.	concepts , materials adopted and constructional details	queries if any.	visit report
Unit-III Types of foundation (9hrs)	To study soil conditions and suitability of foundations on particular type of soil. To study different types of foundation like Steel grillage footing, R.C.C. strip, raft and cellular foundation. Machine Foundation etc and their suitability as per the soil conditions.	23 rd July- 1 Introduction to the topic. -2 hrs.- Site visit 25 th July 3 hrs.- site visit report Plate	Sketching types of foundation depending upon the soil conditions, load distribution etc.	Visit to Geotech lab, Nagpur. Visit to three different sites with different types of foundation.	Audio visual presentation explaining in detail types of foundation. criteria for selection of foundation type as per the soil condition and the load behaviour of the structure	Clarifying the queries	Sheet and site visit report
Pile Foundation (3hrs)	To study the types of piles with respect to material, method of construction like Piles In Timber, Steel and R.C:C. (Pre-cast and Castin situ) R.C.C. Under-rimmed piles, pile caps etc.	30 th Aug -3 hours		Site visit to be finalised as per availability.	Power point presentation for understanding the decision to recommend pile foundation on site. Understanding the methods of construction. Types of pile foundations	Discussion on site visit experience and clarifying the queries if any	Site visit report +sheet
Submission on 1st August 2019							
Unit-IV Earthquak (6hrs)	To study the earthquake zones in India. To understand the terminologies related to Earthquakes and its effects on buildings. To study Architectural	1 st Aug 2019 3 hours 6 th Aug- 3hrs	Study of earthquake incidences and their effects on bldgs., Sketches		Audio visual presentation explaining in detail the various seismic zones in India, reasons &behavior of	Clarifying the queries	Sketches and notes.

	design considerations.				earth during earthquake, its effects on bldgs., Bldg, design considerations.		
Unit-V DPC and Water Proofing (6hrs)	To study Waterproofing with respect to old and new materials. To study methods of water proofing for roofs, slabs, foundations), basements, swimming tanks etc.	8 th Aug-1hr Introduction to the topic. 2 hrs.- Site visit 13 th Aug - 3 hrs.- site visit report Plates	Collecting photographs of effects of dampness in bldgs.	Site visit to explore the application of damp proof compound chemicals during construction Seeing practically various techniques and methods adopted on site by contractors and architects (gained through experience)to keep the construction damp proof and water proof.	Explaining the difference between water proofing and damp proofing Techniques used during construction to avoid water percolation Various materials used from traditional time to present day, etc.	Clarifying queries if any	Plates and Site visit report.
Unit-VI Plaster and finishes (6hrs)	To study the different type of plaster and finishes	20 th Aug – 1hr Introduction to the topic. 2 hrs.- expert lecture with demonstration. 22 nd Aug 3 hrs.- report compilation.	Collecting examples from magazines and newspaper	Collecting samples from market	Explaining explicitly the applicability of various types of plastering techniques and finishing styles used in construction	Discussing on the new methods adopted . Discussing on the brochures collected through market survey	Market survey and hands on experience report.
Paints and Varnishes (3hrs)	To study the different type of paints and varnishes, their composition, properties, preparation Method of application and suitability on different surfaces	3 rd Sept 2019 3 hours	Collecting the data on the use of paints and varnishes for different locations (specific for India)	Collecting samples from market	Types of paints and varnishes available. Basic difference between the two. Change in applicability with respect to context and site requirements.	Discussing issues like the properties, characteristics, application and availability in detail.	Market survey report & tutorial

Roofs (6hrs)	To study R.C.C roofing systems, North light roofing, Skylights in R.C.C Cofferred /Grid slabs, Flat and Flat plate slabs, lift slab etc.	5 th Sept 3 hours 6 th Sept 3hrs.	Sketching types of roofing with respect to context. Preparing conceptual models to understand the behaviour of roof and the load distribution from simple supported to supporter.		Explaining the types of roofs and reason for different forms with respect to place. Structural behaviour Materials and techniques adopted in construction field	Discussion on behaviour of roof with reference to the material specification and technique.	Sheet
Submission of above units-17th September 2019 FINAL PORTFOLIO SUBMISSION -26thSeptember 2019							

Assignments

Sketch book	Model	Site Visit	Tutorials	Market Surveys(material)
Quality of Sketches	Scale & Proportion	Qns. Regarding visit	No. of questions	Format for surveys
Proportion	Material			

Evaluation Scheme

S.No.		%
1	Attendance	20
2	Plates, Models, Sketch book, tutorials	20
3	Site visit	10
4	Test	50

STRUCTURAL DESIGN & SYSTEMS –V

Teacher Incharge: Mr. Rupal Wadegaonkar

July:- 1, 8, 15, 22, 29

August:- 5, 19

Sept:- 9,16, 23, 30 Oct: 7

Unit	Dates	Topics
I	1 st , 8 th , 15 th , 22 th , 29 th July	Properties of concrete, Concept of R.C. C, Elastic, Ultimate load Theory, Limit State Theory
II	5 th , 19 th August	Design of singly reinforced concrete, Doubly reinforced Concrete
III	9 th , 16 th , 23 rd September	Design of T beam, L beam
IV	30 th September, 7 th October	Design of shear reinforcements, R.C.C Sections in tension

BUILDING SERVICES II

Subject Teachers -Ar. Pratima Dhoke, Ar. Anuradha Bhute

July:- 3, 10, 17, 24, 31

Aug :-7, 21

Sept :- 4, 11, 18, 25

Oct: 9th , 16th

The second part of building services approaches with increased complexity and direct relation to design. This is a continued version to previous semester with a larger magnitude wherein you get the information related to large campuses, complexes, high rise buildings and special uses like swimming pools and firefighting. This semester is not only a theory-based subject but you also need to design and handle the services layouts of larger scale projects.

Aim

The aim of the subject is to acquaint you about the importance, installation and working of various services related to campuses and high rise buildings. The scope lies in water services, sanitation, electrical services, storm water drainage and rain water collection and disposal.

Objective

The objective of the subject is not only to transmit knowledge but to provide a deeper insight into the subject by following various physiological, psychological and sociological bases of education.

Methodology

- Various principles of teaching would be used to link the subject to life by visiting ongoing sites, market surveys and delivering lectures by experts.
- Democratic sessions would be carried out where rigorous group discussions will take place.
- Formal and informal teaching methods would be adopted.
- Students to understand the topic by various ongoing sites.

Date/Week	Topic	Learning Objectives	Methodology	Expected Output
3 rd July	Rain water harvesting	To spread awareness about the importance of water and collection of Rain water To inform them about different active and passive techniques of RWH To accustom them with the space requirements and piping system and capacity of storage tanks	Live Project of rain water harvesting for SMMCA campus & Site Visit	Hands on activity

		used for collection To teach them about the methods of treating and reusing the rain water for various purposes		
10 th , 17 th , 24 th July	Sewage collection and disposal for large campuses, complexes, high rise buildings etc. Mechanical methods of removing sewage from special areas like basement (shone's ejector).	To acquaint them with sewage treatment process and introduce them the concept of smart city To teach them of latest STPs and their processes developed by different organisations (eg. NEERI) To introduce them to smart neighbourhoods by teaching different disposal methods To educate them about mechanical collection and disposal of sewage from basement	Proposal of STP to SMMCA site (smart campus)/ sewage layout of the identified slum Site visit to NEERI campus	A2 size sheets
31 st July , 7 th , 21 st August	Electrical services, various wiring systems, calculations and distribution of loads, electric fittings and appliances, detailed layout of electrical services in a residence	To acquaint the students with basic electrical services at domestic level To provide knowledge about the basic wiring systems and their applicability in a residence. To make students able to design an electrical layout for given plan and do the load calculations. To introduce them to the solar energy and solar panels for generating electricity.	Preparing the electrical layout for their own residence Performing load calculations Guest lecture by Consultant on Illumination by LED Site Visit	A2 Size sheets with detailed electrical layout of residence Calculations of running length of circuit Switch board details Proposal of solar panels to SMMCA
Test on above topics on 1				
4 th Sept, 11 th Sept, 18 th Sept	Schematic water distribution system from treatment plants to town, group housing etc. computing demand for group housing scheme and high-rise buildings. Design of storage and distribution system. Detailed layouts of water supply systems	To acquaint students to complex water supply services. To teach them different types of layouts of water supply and their applicability in design. To make them understand the plumbing system for multi-storey buildings and calculations for water demand.	Preparation of schematic layout of water supply in an identified slum.& Site visit	A2 size sheet with design of water supply layout and location and capacity of ESR Bill of quantities for the same

25 th Sept, 9 th , Oct	Computing special demands of water for swimming pools, air conditioning, firefighting, street washing, fountains and gardens etc.	To make them aware of quantities of water required for various activities and ways to conserve water for future.	Site Visit to Swimming Pool, Fire fighting Systems (as per availability of site)	
16 th Oct	Hot water supply in high rise buildings, boilers, furnaces, solar water heaters.	<p>To teach them about the active systems in hot water supply.</p> <p>To introduce them to various piping materials and the impact of hot water on them (Heat radiation and thermal conductivity)</p> <p>To make the understand about the demand and calculate the capacities of storage tank</p> <p>To introduce different terminologies related to hot water supply and their applicability in multi-storey buildings.</p>		

ARCHITECTURAL GRAPHICS-V

Subject Teachers – Ar. Vishwas Dikhole, Ar. Anuradha Tikkas, Ar. Sanjivane Mohgaonkar, Ar. Ketki Tidke, Ar. Anuradha Bhute, Ar. Vaijayanti Yadav,
Ar. Rita Meshram

July: - 2, 9, 16, 23, 30

Aug: - 6, 13, 20 27

Sept: - 3, 11, 17, 24

Oct: 1, 8,

S.NO	TOPIC/PARTICULARS	DATE OF INTRO OF TOPIC	CLASS	SUBMISSIONS		REMARKS
			Pencil drafting	Final pencil draft	Final CAD drg	
1	Introduction to submission drawing and importance of the drawing, need, procedures, ways and means of sanctioning the plans. Understanding and implementation of building bye-laws, deciphering the structural drawings, the methods adopted to draft and submit the plans, etc. Introduction to format and composition of the submission drawing.	2nd July 19	2nd July19			
	Introduction to working drawing, preparation of detail drawings with all other supporting details (door/window table with cill hts) needed for execution of any project		9th July19	16th July19		Final hand drafted sheets to be checked in the class on 16th July
2	Drafting of "Submission drawing" to be drafted by taking up "My House" introduced in the 2nd semester. Checking of hand drafted sheets in studio, corrections to be given	16th July 19	16th July19	23rd July 19		Final hand drafted sheets to be checked in the class on 16th July
3	Introduction to centre line plan. Information on the methodology adopted for laying of a layout on a virgin site.	23rd July 19	23rd July 19	30th July 19		Pencil drafted sheets to be checked in studio on 23rd July
4	Introduction of "foundation plan". The difference in details required if the plan is load bearing or frame structure. The details of all structural members involved in erecting the structure. Reading of foundation table for erecting reinforcement in structural members	30th July 19	30th July 19	6th Aug 19	Mid term sub of taught topics in CAD format (27th Aug 19)	Pencil drafted sheets to be checked in studio on 30th July

5	Introduction to “plinth level plan”. The difference of outer and inner plinth beams. Reading of plinth table. Introduction to brickwork (4 1/2” & 9”) thk. Information on coping given at each level for structural stability. Incorporating schedule of doors/windows to reach lintel level.	6th Aug 19	6th Sept 19	13th Aug 19		Pencil drafted sheets to be checked in studio on 6th Aug
6	Introduction to lintel level plan with design of lintel beams above every opening. Reading of lintel table to erect lintel beam.	13th Aug 19	13th Aug 19	20th Aug 19		Pencil drafted sheets to be checked in studio on 13th Aug
8	Introduction to r.c.c staircase, laying, marking and design of waist slab staircase and folded staircase. Providing of s.s railing in the staircase. Fixing of railing in the staircase.	3rd Sept 19	3rd Sept 19	17th Sept 19		Pencil drafted sheets to be checked in studio on 3rd Sept
9	Introduction to doors and windows with details of frame as per material used. Preparation of door and window drawing with all fixtures and fastenings used to be specified clearly.	17th Sept 19	17th Sept 19	24th Sept 19		Pencil drafted sheets to be checked in studio on 17th Sept
	Introduction to flooring pattern to be shown in detail plan, specifying material to be used, layout and fixing by appropriate adhesives. Necessary precautions to be taken for providing finishes to flooring materials after fixing	17th Sept 19	17th Sept 19	24th Sept 19		
10	Introduction to kitchen and its details required for fixing the materials used and laying the kitchen layout. The finishes to be used for kitchen ota, fixing of sink and other gadgets.	24th Sept 19	24th Sept 19	1st Oct 19		Pencil drafted sheets to be checked in studio on 24th Sept
11	Introduction to drafting of any details of any architectural features in elevations while execution	1st Oct 19	1st Oct 19			All sheets final sub on 10th Oct 19

Evaluation Criteria:

Attendance	Sessional	Drawings
10	10	30
Total	50 Marks	

THEORY OF ARCHITECTURE II

Teachers in Charge: Ar.Ketki Tidke ,Ar.Vaijayanti Yadav

July: 4, 11, 18, 25

August: 8, 22

September : 5,12,19, 26

October : 3, 10, 17

Sr. no.	Syllabus content	Topics	Schedule	Prescribed Reading	Schedule	Assignment
1	Organization of Forms and Spaces	Spaces	4, 11 July 2019	<ol style="list-style-type: none"> 1. David Colin(2011) Thinking about architecture- An introduction to architectural theory, Laurance King Publishing, London (pg. 62-81) 2. Pierre Von Meiss(1992) elements of Architecture from form to place, Van Nostrand Reinhold , London, (pg 99-126) 3. K.B. Jain, Thematic Space in Indian Architecture (2002), India research Press , New delhi, (preface to pg 15) 	18, 25 July 2019 & 8 August 2019	Write maximum one A4 page (typed and if handwritten 2 A4 pages) response to readings and there will be a group discussion.
2	Character and Style in Building	Elements of space making	22 August 2019	<ol style="list-style-type: none"> 1. How to read Buildings A crash course in Architecture The Herbert Press (2008) (pg. 22-48) 2. Yatin Pandya (2014), Elements of space making , Mapin Publishing, Ahmedabad (pg 14-32 and 	5, 12 Sept 2019	Analytical study of an interesting space to be presented in max. 4 A4 pages (hand drawn sketches)

				pg 64- 90)		
3	Evolution of Architectural concept	Concept Generation	19 Sept 2019		26 Sept 2019	Choose an architectural example and study How the concept for the same was evolved. Any number of A2 Sheets.
4	Principles of Composition, Harmony and specific qualities of design to include dominance, punctuating effect, dramatic effect, fluidity, climax, accentuation and Contrast with building examples.	Dominance, punctuating effect, dramatic effect, fluidity, climax, accentuation and contrast with buildings. Depth, Density of space Etc.	3 Oct 2019	Refer the works of master architects all over world and preferably select a 20 th Century building	10, 17 Oct 2019	Select an appropriate example of a building. Discuss its design w.r.t planning, form spaces and materials so as to understand any/ few aspects Dominance, punctuating effect, dramatic effect, fluidity, climax, accentuation and contrast with buildings Submission on A2 Sheets.

It's a Sessional subject, so assessment will be purely on the basis of assignments. The presence and active participation in class work will be given due credit. The timely submissions will only be accepted. Late submissions will not be entertained.

SPECIFICATION

Teachers Incharge - Prof. Seema Burele, Ar. Sneha Mandekar Tirale

July:-1, 4, 8, 11, 15, 18, 22, 25, 29

Aug :-1, 5, 8, 19, 22

Sept :- 5, 9, 12, 16, 19, 23, 26, 30

Oct: 7, 10, 17

DATE	TOPIC	INPUT	EXPECTED OUTPUT	EVALUATION
July 01/07/19 04/07/19	Unit –I Introduction Definition Use Importance of Specification Application	Lecture/ Interaction		
8th, 11th, 15th, 18th, 22nd, 25th, 29th July 2019 1st and 5th August 2019	Unit-II Specification of basic building materials such as bricks, stone aggregate, cement, steel, timber etc. Specification of materials used in flooring and finishing such as ceramic tiles, marble mosaic tiles, paints and varnishes. Specifications of material used in roofing and roof covering such as tiles, A.C, G.I and Aluminium sheets etc.	Lecture/ Interaction	Tutorial and Presentations by the students 5th August 2019 SUBMISSION	30 Marks
8th, 19th, 22nd August 2019, 5th, 9th, 12th, 16th, 19th, 23rd September 2019	Unit –III Specification for fixtures and fastening, proprietary materials along with manufacturer's specifications, trade names of such materials. Electrical / Power backup Sanitation / Drainage Hardware Water Supply	Lecture/ Interaction	Survey and Presentations by the students	15 Marks

SESSIONAL 26th August – 31st August 2019				
8th, 19th, 22nd August 2019, 5th, 9th, 12th, 16th, 19th, 23rd September 2019	Unit –III Specification for fixtures and fastening, proprietary materials along with manufacturer's specifications, trade names of such materials. Electrical / Power backup Sanitation / Drainage Hardware Water Supply	Lecture/ Interaction	Survey and Presentations by the students	15 Marks
26th, 30th September 2019 3rd, 7th, 10th and 17th October 2019	Specification for demolition work, temporary construction like sheds, exhibition stalls, gateways.	Lecture/ Interaction	Presentations by the students 30th Sept SUBMISSION	
EVALUATION CRITERIA				
Attendance	Subject contents/ Sessional exam	Assignment 1	Assignment 2	Total
20	20	30	30	100

ELECTIVE A-COMPUTER APPLICATIONS II

Subject Teachers – Astral, Ar. Vaijayanti Yadav, Ar. Sujata Godbole, Ar. Harpreet Kaur Saggu

July: 05,12,19,26 August: 2,9,16,23,30 September:13,20,27 Oct: 4,11,18

Objective-

To teach students to develop designs through 3D visualization and prepare presentable drawings in Revit.
 Lot of practice sessions will be given to make students capable of generating fast and best quality architectural drawings.

Date	Unit to be covered	Inputs and outputs	Evaluation
05/07/19	Fundamentals- Project Template, Template Path, Unit Level, Model Line, Wall, Duplicate Wall, Modification Commands, Door, Window, Furniture	Inputs through LCD Projection and students will explore in the lab	Submission 4th Week July 10Marks
12/07/19	Filter, Floor, Column, Roof	Inputs through LCD Projection and students will work in the lab	
19/07/19	Curtain Wall, Curtain Grid, Mullion, Wall sweep Wall revel, Opening, Model text, Group	Inputs through LCD Projection and students will explore in the lab	
26/07/19	Stairs, Railing, Ramp	Students will work in the lab All small assignments on above topics	
02/08/19	Extrusion, Revolve, Sweep, Blend, Wall by face Floor by face, Roof by face		20Marks
09/08/19	Topo surface, Sub region, Split surface, Merge surface, Property line, Building pad, Site component, Parking components Label contours	Students will work in the lab	
16/08/19	Dimension, Text, Room and area plan, Color scheme, Section, Call out, 3d crop view, Camera Walkthrough, Schedule Sheets	All small assignments on above topics	

23/08/19 & 13/09/19	Modify sheets, Material addition, Material modification, Material creation, Revit family creation, Render settings Cloud render, Project submission		
30/08/19	Mid term Sessional Exam		20 Marks
20/09/19, 27/09/19, 4/10/19, 11/10/19	Design Project to be converted into revit Drawings	Students will work in the lab	Final Submission 18 OCT 30 Marks

20 marks will be allotted for the attendance.

All the work in the form of assignments should be strictly done in the lab itself.

Students need to work in the lab Computer preferably. They can add password to their file to protect from copying.

ELECTIVE B- APPROPRIATE TECHNOLOGY

Subject Teachers – Ar. Shobhana Tembhurnikar, Ar. Sneha Mandekar Tirale

July: -5, 12,19,26 Aug: -2,9,16,23 Sept: -13,20,27 Oct: - 4,11,18

The term **Appropriate Technology** is used to describe the use of technology and engineering that result in less negative impacts on the environment and society, i.e., technology should be both environmentally sustainable and socially appropriate. Besides being functional and relatively cheap it is durable and employs renewable resources

The study will enrich the knowledge of the student about the alternative /innovative materials and construction techniques appropriate for rural and urban area.

SrNo	Duration	Objective for each topic/ content	Teachers input	Expected output	Evaluation
1	5th July2019	Introduction to the subject Objectives <ul style="list-style-type: none"> • To make student understand the concept of appropriate technology, its relevance in present day context, scope etc. • To make students aware of the importance of the subject. • To understand the future prospects of the subject. 	Lectures and discussions	Collage	
2	12th ,19th and 26th July 2019	Study of appropriate technologies in various regions which will include the construction methods adopted, locally available materials, climate etc. Objectives <ul style="list-style-type: none"> • To make student understand the traditional construction methodologies adopted in various regions of India. • To make them aware of the various materials used w.r.t its quality, availability, cost and maintenance etc. 	Lectures and ppts	Sheets	
3	2nd August 2019, 9th August 2019 16thAugust 2019	Study of appropriate building construction techniques and material in building services. Objectives <ul style="list-style-type: none"> • To study different appropriate building materials and its properties, used for building services 	Lectures and ppts	Report (A4 pages)	

SUBMISSION – ASSIGNMENT- I 23rd August 2019			30 Marks		
4	23rd, August and 13th,20th Sep 2019	Study of bamboo as a building material Objectives <ul style="list-style-type: none"> To study the use of bamboo as building material, its properties and varieties available in the country and its construction techniques 	Lectures and ppts.		
5	ASSIGNMENT-II 30 Marks Objective- Integrating Appropriate technology with Design. Designing and preparing the conceptual sketches with bamboo as the building material for any one amenity from Smart Housing. This assignment will help student <ul style="list-style-type: none"> to explore different innovative forms out of bamboo fulfilling the requirements of smart housing to understand the construction details required for the same. Note: The submission will be in the form of sheets and model.				
6	27th September 2019	Study of Solar Energy in the form of photovoltaic cells and panels, solar water heater etc. Objective To make student understand the use of solar energy in day to day life. To make them understand its usability and cost effectiveness.	PPT		
7	4th Oct 2019	Visit to Building centre engaged in research and development of appropriate technology. CSV Wardha.		Report	
SUBMISSION – ASSIGNMENT- II AND SITE VISIT REPORT 11thOct 2019					
EVALUATION CRITERIA					
	Attendance	Subject contents/ Sessional exam/ Surprise exams	Assignme nt 1	Assign ment 2	Total
	20	20	30	30	100

ELECTIVE B: LANDSCAPE DESIGN STUDIO

Subject Teachers: Ar. Ketkie Tidke and Ar. Rita Meshram

July; 5, 12, 19, 26 Aug; 2, 9 16, 23 Sept; 13, 20, 27 Oct: 11

INTRODUCTION

The elective aims to facilitate an understanding amongst students in order to take site planning decisions. To help them orient and locate group of structures on site, so that the buildings together with the interrelated spaces become one architectural entity. To deal with open space structures. At Kailash in Ellora the connection of art & environment is monumentally evident: landscape becomes architecture & architecture is also sculpture, a temple in honour of a mountain carved into a mountain. In another era—grand concept of Lutyen's central vista of imperial Delhi- many centuries later- Architecture, urban design, town planning, landscape, merge one to the next.

Date	Learning objective for each topic/ Content	Teacher's interaction through lectures/ ppt/ site visit etc	Expected output	Evaluation
5 th July 2019	General Introduction & Introduction to assignment 1: To identify and study existing site plan of building complex of an architect.	General discussion and orientation	Studio work	
12 th July 2019	Continuation of assignment 1		Sheets	30
19 th July 2019	Continuation of assignment 1		Evolving strategies for own design	
22 nd July 2019	Submission			
26 th July 2019	Introduction to assignment 2:	Examples from history, contemporary examples for effective site planning		
2 nd Aug 2019	Assignment 2	Siting and orientation of buildings to study the integration of outdoor spaces and built spaces, Parking lots, broader planting	Incorporating strategies at site level	

		policies for the site.		
9 th Aug 2019	Assignment 2	Working on Ar. Toye Landscape Design competition	Incorporating strategies at building level	
16 th Aug 2019	Assignment 2	Strategies in design	Incorporating strategies at building level	
23 rd Aug 2019	Jury		Jury of analysis	20
13 th Sep 2019	Assignment 2		Jury of analysis	
20 th Sep 2019	Assignment 2	Strategies in design	Incorporating strategies at detailing level	
27 th Sep 2019	Assignment 2	Discussion		
11 th Oct 2019	Assignment 2		Final Submission	30

Evaluation Scheme

Attendance	Sessional exam	Assignment 1	Assignment 2	Total
20	20	30	30	100

Format of each class:

- Presentation on related theories and Concepts related to integration of landscape and architectural projects
- Discussions and Interaction with students based on design values and design Concepts.
- Activity introduction, Evaluation and feedback session

Bibliography

- Kevin Lynch, Site planning-
- JOHN ORMSBEE SIMONDS (A Manual of Site Planning and Design), Landscape Architecture (Third Edition)
- R.GENE. BROOKS, DAVID.W.LESTAGE, Before Building: Site Planning in the Digital age (Second Edition)